Rikspolisstyrelsen
Polisens verksamhetsstöd
Administrativa enheten
Upphandlingssektionen

Agreement Specification

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1 General

a) The contracted supplier shall supply a mobile alarm unit to be used in Sweden. Any of the available Swedish mobile telephone operators and GSM-networks shall be possible to use.

b) The alarm unit shall send text messages with GPS position data to the management system used by the Swedish Police.

c) The alarm unit shall provide a possibility for the alarm centre operator to hear what is happening at the scene to give better situation awareness.
The unit shall also provide a possibility to communicate with the user.

2 Functional Requirements

2.1 Alarm functionality

a) When the alarm button is continuously pressed for 2 seconds the unit shall start the alarm sequence and send two text messages including the latest updated position data, time and date. The messages shall be sent to two different recipients.
The text message format to be used is specified in chapter 3 (message type 1).

b) A short vibration shall confirm that the alarm button has been pressed and the alarm sequence being started.

c) The unit shall continue to send two text messages to the two recipients with the latest updated position data, time and date every 30 second (tracking) until the alarm sequence is manually ended or after 120 minutes of the initial alarm.
The text message format to be used is specified in chapter 3 (message type 2).

d) It shall be possible to manually end the alarm sequence and tracking. The method for doing this shall prevent unintentional ending of the sequence.

e) Two short vibrations shall confirm that the tracking manually has been ended or that the 120 minutes has passed.

f) The alarm centre operator shall be able to call the unit from any telephone number (also hidden numbers) for 120 minutes after the initial alarm.
The manual ending of the alarm sequence shall not affect this function.

g) The unit shall automatically answer to the call and confirm this with a short vibration. It shall not be possible to end the call from the unit.

2.2 Contact number

a) The alarm unit shall have at least one button for calling an additional programmable number. The call shall be possible to end from the unit.

2.3 GPS

a) The GPS-receiver shall always be on and updated position data available for sending.

b) If the GPS-receiver has reception the position data stored in the unit shall not be older than 30 seconds.

3 Technical requirements

3.1 Status indicators

a) The unit shall have a status indicator showing that it is active.
Indicated status levels shall be:

ON
ON with GSM connection
ON with GSM connection and GPS reception

b) The unit shall have a status indicator showing the battery status.
Indicated battery levels shall be in at least 3 levels.

3.2 Voice communication

a) The unit shall have a built-in microphone with good sensitivity to make it possible to hear the user and the closest environment even if the unit is covered by clothes or in a bag.

b) The unit shall have a built-in speaker with good volume and audio quality to make it possible for the alarm centre to communicate with the user even if the unit is covered by clothes or in a bag.

3.3 Alarm Push Button

a) The unit shall have an easy identifiable alarm push button. The push button shall give a good tactile feedback when pressed. The push button shall also make it possible for easy use when the unit is placed in a pocket or placed in a belt and covered by clothes.

3.4 On/Off Function

a) The unit shall have one or more buttons for the on/off-function. The ON/OFF function shall be designed and integrated to make it harder to turn off the unit by mistake.

3.5 Programming

a) For the purpose of programming and configure the unit, as specified in this requirement specification, a PC-software shall be supplied.

b) All programming of telephone numbers shall be done by connecting the unit with a cable or connecting the SIM-card using a SIM-card reader.

c) If no additional contact number is programmed (left blank) the function of the push button assigned for the additional contact number calling shall be inhibited.

d) The time specified in 2.1 a) for the Alarm Push Button detection shall be possible to change by connecting the unit for configuration.

e) Programming and configuration over-the-air is not allowed.

3.6 SMS Message format

a) The unit shall send text messages according to B&M OVLS format with GPS in WGS84 format.

b) Two types of messages shall be sent from the unit. Message type 1 and message type 2.

c) Message type 1 shall be sent when the alarm button is initially pressed and shall be formatted:

ALARM,**A**:**341**NDDMMmmEDDDMMmmeerr**A**SYYMMDDhhmm**U**

d) Message type 2 shall be sent as tracking data after the first initial alarm message and shall be formatted:

ALARM,**A**:**991**NDDMMmmEDDDMMmmeerr**A**SYYMMDDhhmm**U**

e) In the messages the following values shall be used:

DD(D)MMmm:

Longitude and Latitude.
D: Degrees.
M: Minutes.
m: decimal-fraction of minutes

ee:

Extra decimal-fraction of minutes where the first e is the third decimal-fraction for the Latitude and the second e is the third decimal-fraction for the Longitude.

rr:

Reserved. Filled in the message as space chars.

S:

Status of the position data.
0: Not updated.
1: Updated GPS fix.

YYMMDDhhmm:

Year Month Day Hour Minute in UTC time.

f) Bolded characters are firm values in both text message types.

g) No other text messages shall be sent from the unit at any time.

4 Requirement for approvals

a) The unit shall have all necessary approvals for being used in Sweden as a mobile GSM terminal and GPS receiver.
The unit shall be compliant to EC directives for this type of equipment and thereby CE compliant and labelled.

5 Requirements for mechanical environmental durability

a) The unit shall meet the requirements in ISO SS-EN 60529 for testing against penetrating objects and water. The unit shall be approved for IP 54 or better.

b) The unit shall meet the requirements in ISO SS-EN 60068-2-32 Ed, free fall. The unit shall be approved for 1 meter with object angles corresponding too normal uses (hand-held or placed in belt). The unit shall show normal functionality after being subjected to the testing.

c) Certificates or test reports shall prove the approvals according to a) and b).

d) An independent test institute shall perform the testing according to a) and b).

6 Requirements for accessories

a) The unit shall be delivered with a minimum of one complete charger for connecting to 230V AC (Swedish type of wall-socket connector) and a minimum of one complete charger for connecting to 12-24V DC (vehicle type of connector).

b) The unit shall be delivered with a detachable holder for placing the unit in a belt.

c) The unit shall be delivered with a detachable neck strap where the strap has a safety lock, releasing if someone pulls the strap.

d) All accessories shall be possible to buy separately.

7 Requirements for delivery

7.1 Case

a) The unit with required accessories shall be delivered in a protective case.

b) The case shall be marked with a label indicating product name, article number, serial number and the International Mobile Equipment Identity (IMEI) number for the unit.

c) The case shall have an external pocket for storing of a document in A5 format. The pocket shall be transparent.

d) The case shall have an internal pocket for holding the manual.

8 Requirements for documentation

8.1 User Manual

a) The manual shall be written in Swedish.

b) The unit shall be delivered with a printed manual in A5 format.

c) The manual shall be available as a digital file in PDF format.

8.2 Hardware documentation

a) A specification of the hardware configuration of the unit shall be delivered with the tender. The specification shall describe at least the type of components used in the unit concerning GSM and GPS.

b) A technical specification with data concerning the battery capacity for the unit configured as required in this requirement specification shall be provided.

c) Product information containing size, weight and SAR-value (Specific Absorption Rate, W/kg) shall be delivered with the tender.

8.3 Software documentation

a) For the PC software to be used for programming the unit a specification shall be available on request.

8.4 Product Change documentation

a) If any changes are implemented to the product (hardware or software) during the time of the agreement, a document describing these changes shall be provided to the National Police Board without request.
The document shall describe the changes and the testing performed to verify the compliance to this requirement specification.

b) No changes in products for the Swedish Police, either hardware or software can be made without the written approval from the National Police Board.